

SPATIAL FACTORS INFLUENCING THE REGENERATION OF ABANDONED LANDSCAPES ADJACENT TO WATER BODIES: CASE STUDIES FROM PANADURA & MORATUWA, SRI LANKA

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Abstract: Abandoned landscapes adjacent to water bodies often cause challenges to urban environments, yet they also hold significant potential for regeneration into vibrant community spaces. This study examines the spatial factors that allowed for the regeneration of abandoned landscapes near water bodies focusing on two case studies in Sri Lanka, the Thun Bodhiya in Panadura and the Katubedda Walking Path in Moratuwa. The study followed a qualitative case study approach utilizing semi-structured interviews, photo analysis, and case study analysis to understand about the regeneration. The analysis was based on four spatial variables, accessibility, functions, identity, and visibility & safety. Findings reveal that improved spatial accessibility and connectivity were fundamental in reactivating these landscapes by linking them with surrounding neighbourhoods. Functional diversity, including recreation, religious activities, and social gathering opportunities, enhanced community engagement. Elements of identity, such as cultural landmarks and symbolic vegetation, strengthened emotional attachment and place memory. Visibility and safety, achieved through open layouts, lighting, and surveillance, were crucial in encouraging frequent use. The study proposes that spatial design variables work together to help drive regeneration efforts, and planning for cultural identity along with functional and safe spatial environments is equally important.

Keywords: *Spatial factors, Regeneration, Abandoned landscapes, Water bodies*

1. Introduction

Landscapes adjacent to bodies have historically played a vital role in the cultural, ecological, and social dynamics of communities, especially in South Asia. They served not only environmental functions but also as spaces for religious practice, social interaction, and communal identity, fostering daily livelihoods, cultural celebrations, and spirituality. Yet, with rapid urbanization, policy neglect, and socio-economic shifts, many water-related landscapes fell into disuse and neglect. Abandonment means more than environmental decay, it presents an ecological and social rupture of community–landscape relationships, and a diminishing of cultural ties and collective stewardship. Yet, in certain contexts, these neglected spaces are reclaimed and transformed into socially significant places. This regeneration often happens without state intervention, driven by local initiatives that incorporate spiritual, cultural, or practical values, demonstrating the potential for abandoned water-related landscapes to become multifunctional community assets.

Regenerating abandoned landscapes near waterbodies has become important for enhancing urban resilience, ecological viability, and public health. This process allows for the restoration of community identity and the creation of inclusive public spaces. While international research has focused on governance, economic input, and ecological rehabilitation, spatial parameters influencing the activation and sustainability of these landscapes receive less attention. In Sri Lanka, studies mainly emphasize ecological rehabilitation and heritage conservation, with insufficient focus on spatial elements for effective regeneration.

Addressing this gap, the present study examines the spatial factors that influence the regeneration of abandoned landscapes adjacent to water bodies in Sri Lanka. Specifically, it investigates how spatial accessibility, functions, identity, visibility and safety contribute to the regeneration of these landscapes and their reintegration into contemporary community life. The objective of the study is to identify and evaluate the spatial factors that shape regeneration processes, focusing on both physical transformations and the social significance that emerges from renewed use. To ground this inquiry, two case studies were selected as Thun Bodhiya, Panadura and Walking Path, Katubedda, Moratuwa. These case studies provide insights into how spatial factors and community involvement can convert abandoned landscapes into safe, meaningful, and active public spaces. The findings are intended to add theoretical insight and practical advice to landscape architects, urban planners, and policymakers with an interest in regenerating abandoned water near landscapes in Sri Lanka and similar contexts.

2. Literature Review

This chapter evaluates existing literature on spatial impacts related to accessibility, connectivity, functionality, identity, and

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DOI: <https://doi.org/10.31705/FARU.2025.62>

safety. It examines abandoned landscapes, their characteristics, causes of abandonment, and their effects on communities and environments. The focus then shifts to landscape regeneration, particularly water-related landscapes, which hold unique significance in semi-urban areas. The chapter concludes by identifying gaps in the literature concerning spatial impacts in Sri Lanka and establishes a theoretical framework for understanding the regeneration of abandoned landscapes in relation to water bodies.

2.1. SPATIAL IMPACTS

Spatial impacts refer to the effects or influence those changes or activities in one location have on surrounding or related locations in a spatial context. These impacts can be observed in various fields such as urban planning, environmental studies, trade, and infrastructure, and can either be positive or negative.

Spatial impacts have significant implications for economic activities and infrastructure development. Transportation infrastructure, in particular, plays a crucial role in shaping regional economic patterns and agglomeration processes by influencing accessibility and connectivity. As Zhenhua Chen and Kingsley Haynes (2016) explain, “Transportation infrastructure plays an important role in regional economic development both in the stimulation of growth and as a response to output expansion.” They further note that the complex impact mechanisms involve demand effects through variations in transportation prices and supply effects related to transportation costs. The presence of spatial autocorrelation necessitates specialized spatial econometric methods to avoid biased results when assessing these impacts (Chen & Haynes, 2016)

Spatial impacts greatly influence cultural and social identity, since they affect a community's placement and emotional connection with their surroundings. The literature on how place attachment is included in spatial planning emphasizes that place attachment and local knowledge, as experiential space governed through emotional attachment, is necessary for sustainable spatial development. Li (2024) meta-analysis provides an overview of the possible ways that attachment can be incorporated into spatial planning, and notes that “place attachment can be viewed as a resource that supports and informs spatial planning and transformation processes and, additionally, allows for higher degrees of sustainability” (p.4). Li's (2024) meta-analysis identifies four methods to incorporate place attachment into planning, including developing strategies for scoping development with regards to attachment, developing parameters or guidelines for attachment, including attachment data in the assessment, analysis and planning process, and advocating for using place attachment as a means for sourcing interests for participatory planning and facilitating empowerment of communities toward economic development ends (Li, 2024).

2.2. REGENERATION

From a landscape architectural perspective, regeneration refers to a holistic process of reviving and transforming abandoned or degraded landscapes not only reinstating ecological functionality but also reweaving social, cultural, and symbolic threads within the community and environment. Regeneration is a process of collaborative transformation of abandoned or degraded landscapes, restoring ecological systems while re-activating social meaning, cultural connections, and local stewardship. This is achieved through pattern-based design, participatory co-design, and a focus on both ecological resilience and community well-being (Smithwick et al., 2023).

Mang & Reed (2012) describe regenerative landscape design as a process that aims to actively restore and improve ecosystems, emphasizing healing rather than just sustaining degraded landscapes.

“Regenerative landscape design is a holistic approach to environmental restoration that goes beyond sustainability. While sustainable design focuses on maintaining ecological balance, regenerative design aims to actively restore and improve ecosystems... the core idea is that landscapes should not only sustain themselves but also regenerate over time, creating systems that are more resilient to environmental stressors such as climate change and urbanization.” — Mang & Reed (2012)

Ahern (2016) emphasizes that regenerative design encourages landscapes to function as “self-renewing systems that support biodiversity, restore natural processes, and enhance the quality of life for human and non-human communities alike.” This perspective highlights the dynamic and restorative nature of regenerative landscapes, which go beyond mere sustainability to actively improve ecological health and resilience. Furthermore, regenerative design plays a vital role in strengthening sense of place by embedding cultural identity and community traditions into the landscape. As noted by Swaffield and Primdahl (2019): “Regenerative design also enhances the sense of place by reflecting the identities and traditions of communities, making landscapes culturally and socially meaningful.” Together, these insights underscore that regenerative landscape architecture integrates ecological restoration with cultural and social dimensions, creating environments that are both environmentally resilient and deeply connected to the people who inhabit them.

2.3. ABANDONED LANDSCAPES

In accordance with Crowley and Haines (2006), abandoned landscapes have been neglected or left and mismanaged by human beings. It leads to varying degrees of ecosystem disruption and changes in the landscapes. In those landscapes, human activities have ceased and overgrown vegetation with structure of the landscapes have changed as a result according to the interpretation of Lambin et al. (2003). Famous researchers have logically investigated the topic of abandoned urban

regions (Cao et al., 2006). The identified reason for this concern is that after the industrial revolution and real estate speculation, most abandoned peripheral homes, buildings, infrastructures and factories have turned into an issue for existing landscapes.



Figure 1: Examples of Abandoned places
(Source: Google image)

2.3.1 Characteristics of Abandoned Landscapes

Urban environment has a significant impact that can effectively the physiology, morphologies, and behavior patterns of people who dwell in cities according to Shochat et al. (2006). To change the way of thinking in order to deal with the issues that occur under urbanization it is essential to understand the purpose and potential of abandoned urban places and their aesthetic importance. Misuse and low level of aesthetic appeal, these locations according to Sousa (2009), are a tension indicator within the economy, society, and economy. People who come across abandoned regions are emotionally affected by their isolation and desolation which makes them feel depressed and nostalgic. The contrast between the past and the present state of abandonment creates these emotions. According to Krupat (1985), a city is a physical environment with geographical elements that have immediate impacts on the behavior of people. People usually say a city according to the terms of their relationships rather than objective qualities. According to Rapoport (1993), humans can connect to the environment, and this connects to emotions. Scale, form, color, light, and textures are the characteristics that are linked to spatial quality to emotional reactions that influence the cognitive of people and physical behavior (Holgate, 1992).

Fear and feeling of being lost are created by the environment on mental health (Evans, 2003). According to Philipp et al. (1999), beauty is the visual aspect that enhances the enthusiasm experience and response whereas an environment with a high aesthetic quality improves emotions such as happiness and relaxation (Grinde & Patil, 2009). Because of the lack of usefulness, typology, visual appeal and proposed name, those places depict natural social, economic, geographical, environmental, and temporal conflicts according to Sousa (2009). Future housing prospects, community growth, economic opportunities, and public safety are all dangerous in these landscapes (Wilkinson, 2011).

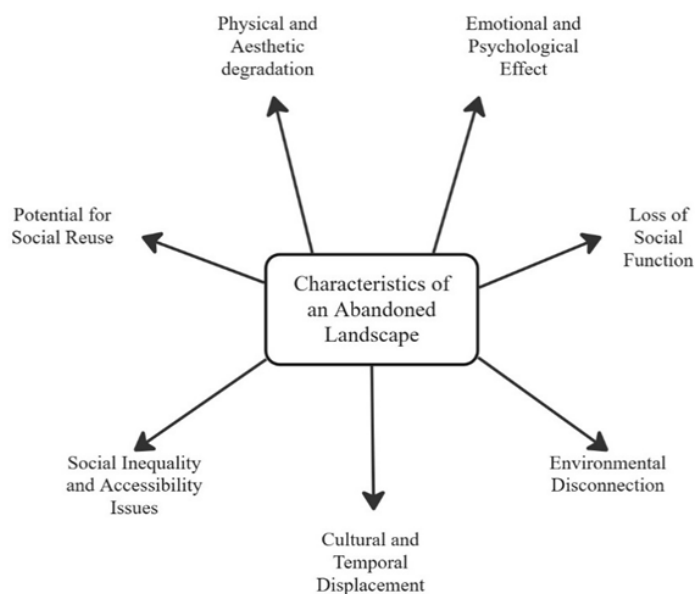


Figure 2: Characteristics of an Abandoned Landscape
(Source: Compiled by Author)

2.3.2 Regeneration of Abandoned Landscapes

The regeneration of abandoned landscapes refers to the process of reactivating and revaluing degraded, underutilized, or neglected spaces through design, planning, and community engagement. It involves restoring both the physical functionality and the social and cultural meaning of a landscape, transforming it into a place that serves contemporary community needs while respecting its historical and environmental context. In accordance with Crowley and Haines (2006), abandoned landscapes have been neglected or left and mismanaged by human beings. It leads to varying degrees of ecosystem disruption and changes in the landscapes. In those landscapes, human activities have ceased and overgrown vegetation with structure of the landscapes have changed as a result according to the interpretation of Lambin et al. (2003).

2.4. WATER BODIES

Tanks, ponds, canals, rivers and surrounds are examples of water bodies that have long served as multipurpose areas that promote agricultural operations, biological processes, and sociocultural activities. These landscapes have played an important role in community gatherings, religious ceremonies, and the preservation of local identity and legacy in both rural and semi urban settings. They have also helped with water management and biodiversity conservation (Ahern, 2011; Selman, 2006). Their importance goes beyond their practical use; they represent firmly held cultural values and symbolic connotations in the day-to-day activities of the communities in which they are found. These landscapes often formed the backbone of religious, agricultural, and communal life.

According to Ruban (2020), the term “water areas” used synonymously with water bodies in landscape and urban planning, refers to areas under natural bodies of water such as oceans, seas, lakes, or rivers, including the water surface, the water column, and the underwater shore. These water areas are considered significant objects of architectural and landscape design due to their ecological, social, and spatial importance in urban environments. The author emphasizes that water bodies have long been used by humans and are crucial for future urban development and environmental well-being, stating: *“The term ‘Water areas’ implies areas under natural bodies of water such as oceans, seas, lakes or rivers. Water areas include the water surface, the water column and the underwater shore. They are potential areas for future human settlement.”* Kurochkina (2020) highlights the critical importance of water bodies within urban environments, stating: *“An important component of the natural-ecological framework, but also the basis for the framework of urban-planning natural-technogenic systems as a whole.”* This quotation emphasizes that water bodies are not only vital ecological elements but also foundational components in urban planning. Their presence supports ecological balance by maintaining biodiversity, regulating microclimates, and managing hydrological cycles. Moreover, water bodies contribute significantly to the formation of public spaces, offering recreational, aesthetic, and social benefits that enhance urban life quality. They serve multifunctional roles by integrating natural processes with human-made environments, thus bridging ecological health and urban development.

3. Methodology and Case Studies

This research adopts a qualitative study approach, examining the regenerated landscape of Thun Bodhiya, Panadura and walking path Katubedda, Moratuwa. Data collection will include case study analysis, semi-structured interviews, and photographic analysis that seek to investigate community perceptions, cultural memory, and social influence. This process will document recurrent themes in how the altered landscape has affected identity, ritual and place attachment

3.1. METHODOLOGY

The research employed a qualitative, exploratory case study method that was designed to investigate spatial impacts in the regeneration of abandoned landscapes bordering water bodies. This enables us to provide a comprehensive understanding of spatial transformation at the selected sites and its implications. Data was collected through a combination of semi-structured interviews with community members and users, photographic analysis to document physical characteristics and spatial changes, and field observations to capture patterns of use and behavior.

The study was structured on four spatial parameters as accessibility, functions, identity, visibility, and safety, which guided both data collection and interpretation. By triangulating multiple methods, the research sought to uncover how spatial design interventions and community engagement collectively influenced the successful reactivation of the selected sites. The qualitative orientation of the study allowed for nuanced insights into the interaction between spatial form, cultural practices, and social use, contributing to a deeper theoretical and practical understanding of spatial regeneration in the Sri Lankan context.

To interpret the collected data, several qualitative analysis techniques were employed, each focusing on identifying spatial impacts that caused to regeneration of abandoned landscapes.

- Case Study Analysis - Used to illustrate the differences between physical settings of past and present by mapping spatial arrangements, visual cues, and user interactions.
- Interview Analysis - Applied thematic coding to responses from semi-structured interviews, to identify the spatial impacts.
- Photographic Analysis - Examined photographs of places, materials, and activities to visually identify.

3.2. CASE STUDIES

3.2.1 Case Study Selection Criteria

The case studies selected for this research were driven by three specific criteria. First, all sites had to show prior abandonment, which supports their status as inheriting a period of neglect and distance from any community use. Second, each selected site had to be located adjacent to a water body, in line with the investigation of the regeneration of water landscapes specifically. Third, the selected cases needed to be a transformation of a previous abandoned condition into a more functional landscape.

3.2.2 Selected Case Studies

3.2.2.1 Thun Bodhiya, Panadura

The site of Thun Bodhiya in Panadura, located next to the Bolgoda Lake, which is a distributary of the Kalu Ganga represents a space with profound cultural and spiritual potential, despite featuring three aged sacred Bodhi trees, it sat abandoned and neglected for decades. It is in Bandaragama Pradeshiya Sabha area in Kalutara District. Western Province in Sri Lanka.



Figure 3: Location of Thun Bodhiya;
(Source: Google Maps)

The site remembers stories of the civil unrest period in Sri Lanka from 1987 - 1989, especially in the region of Panadura, reports suggest the site began to be associated with traumatic memories of violence and horror as it was used for violence, including the burning of human bodies with tires. This history widely created a stigma socially around the site leading it to be long abandoned with no spiritual and social activities taking place.

Over time, however, the community members and visitors from neighboring areas started to return to the space because of the stories related to spiritual meaning, and miraculous events associated with Bodhi trees. The location was taken back for religious behavior, worship, meditation, and prayer and re-emerged as a spiritual landmark of significance. Today, Thun Bodhiya serves as a site of individual prayer, ritual practices and cultural communal occasions, demonstrating the efficacy of community-led regeneration of displaced people into a new prominence, within abandoned landscapes. The evolution of the site demonstrates the capacity to participate in, and activate regenerating spatial practices to bring together memory, symbolic spirituality and communal action against a site once memorable for angst and physical neglect, into an effective and boisterous cultural and spiritual node.



Figure 4: Images of Thun Bodhiya
(Source: By author)

3.2.2.2 Walking Path in Katubedda, Moratuwa

Walking Path in Katubedda, Moratuwa, situated along Bandaranayake Mawatha near a canal system, is a success story for the transformation of a once degraded and abandoned water-edge landscape. The Walking Path is located near to University of Moratuwa in Colombo District, Western Province in Sri Lanka.



Figure 5: Location of Katubedda Walking Path;
 Source: Google Maps

Before regeneration, the site had become derelict, served as a place for the disposal of solid waste, and was heavily polluted. Its environmental condition was so poor that it flooded and waterlogged frequently, diminishing usability, and made it unsafe for the communities living nearby. The derelict canal and abandoned area had become connected to unsuitable social activities, including drug parties and other illicit uses, which had separated the site from any positive community interaction with space.

Acknowledging the environmental and social challenges, the Sri Lanka Land Development Corporation (SLLDC) implemented a regeneration project in 2018 which sought to transform the abandoned space into an active and usable public space. Through physical interventions such as building pathways, landscaping, and removing waste, the site quickly transformed into a vibrant walking path that supported various usages from the community. Today, the Katubedda Walking Path is a site where people can walk, jog, or cycle and informally hang out with others, it has become an everyday recreation space for users from Moratuwa and beyond.

Aside from its recreational function, regeneration also has ecological and social benefits. The improvement of the canal edge by cleaning and rehabilitation reduced local drainage issues and risk of flooding and significantly reduced the visual and environmental quality of place. Importantly, the walking path has transformed the way the community engages with the space promoting healthier lifestyles and social cohesion, informal encounters, and the reclamation of space from contaminated and antisocial behaviors.



Figure 6: Images of Walking Path
 Source: By author

4. Data Analysis and Presentations

4.1. CASE STUDY ANALYSIS

The case study analysis examined the spatial and functional changes of each site in a comparative approach of before regeneration and after regeneration. Site layouts and sections were used to illustrate the case studies during use and during their period of abandonment with important issues related to neglect, pollution and underutilization highlighted; this was done subsequently compared with pre-regeneration spatial configurations to enable effective identification of the regenerated condition in relation to our present understanding of accessibility, functionality and community involvement. By bridging the analysis in this way, we were able to articulate the spatial character, social use and inherent symbolic

meaning of the sites collectively, additionally we were also able to demonstrate the role of regeneration with respect to both community life and spatial qualities.

4.1.1 Thun Bodhiya, Panadura

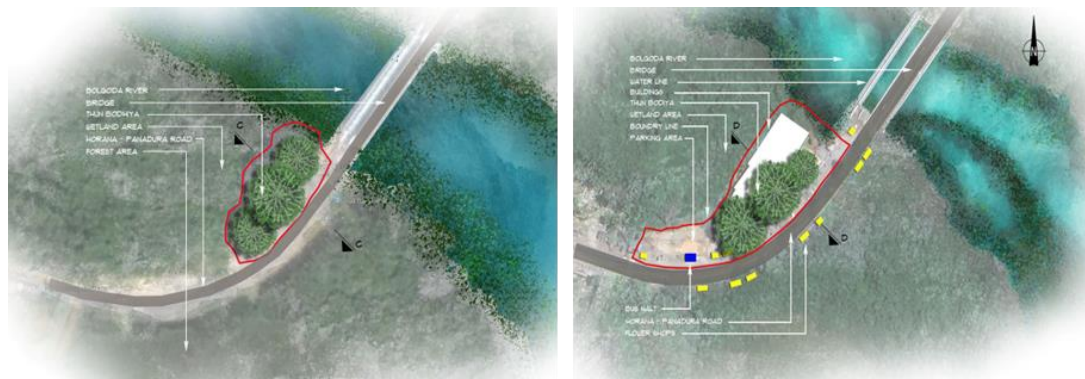


Figure 7: Layout of Thun Bodhiya - Before & After
(Source: By author)

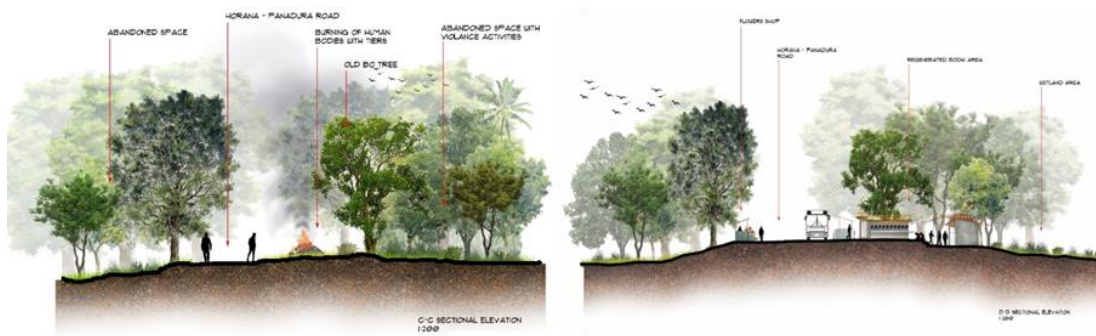


Figure 8: Section of Thun Bodiya - Before & After
(Source: Compiled by author)

4.1.2 Walking Path katubedda, Moratuwa



Figure 9: Layout of Walking Path - Before & After
(Source: Compiled by author)

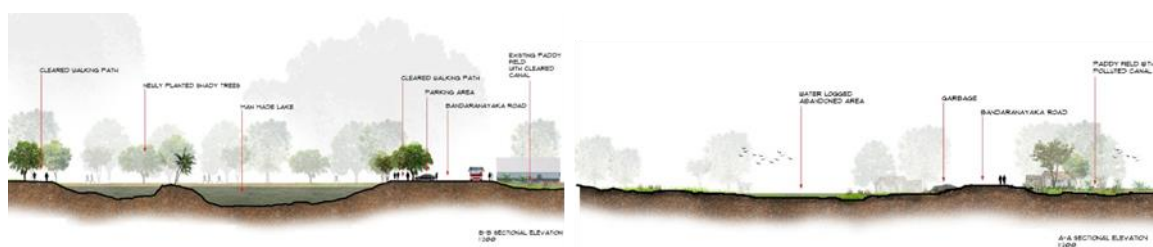


Figure 10: Section of Walking Path - Before & After
(Source: Compiled by author)

4.2. INTERVIEW ANALYSIS

A random sample of 15 users from both case studies, including both male and female users without any age limit, who were using these two spaces for different functions, were selected to participate in semi-structured interviews on site. The semi-structured interview questions were prepared according to six sessions related to the 04 parameters as accessibility, functions, visibility & safety, identity & spatial character.

1. Accessibility

The enhancement of both sites' development has improved their accessibility and spatial connectivity to surrounding landscapes. Along with clearer entries and defined circulation routes and reorganization of surrounding edges, they provided greater orientation and flow, within the landscapes. At Walking Path, Katubedda, Moratuwa people mentioned the simple ease of walking, jogging, or cycling along the linear path that is now connected directly to nearby residential and institutional areas. This sort of connectivity has re-established the site as part of a connective envelope for use not only recreationally, but also socially and in commute time. At Thun Bodhiya, Panadura the improved pedestrian-accessibility compared to the abandoned period, especially to those taking part in spiritual activities and community events has improved the improved limit of vehicular-accessibility has made this site more usable, approachable and easier to negotiate for local visitors arriving on foot. The improvement of accessibility and connectivity has increased the inclusiveness of both sites, meaning more users including families, children, elderly, and working adults are able to experience the regenerated landscapes firsthand.

2. Function

In the period of abandonment, both sites had minimal or no use functionality. The Katubedda site was overgrown, abandoned, and ultimately avoided by the community out of safety considerations. Other than informal uses such as putting garbage or an idle gathering place, the site was seldom used. Also, the area was flooded during the rainy season. The Thun Bodhiya site, while adjacent to a water body, was under performing, with little to no organization or other spiritual purpose, and was left as an abandoned vacant lot. Also, it was ultimately avoided by the community out of safety considerations. However, both landscapes have had an impressive functional change. The Katubedda Walking Path now allows for many kinds of recreation (e.g., jogging, running, cycling, walking, and family fun). The Park is also an informal social platform, reinforcing everyday engagement among community members. The Thun Bodhiya, in contrast, has predominantly spiritual and cultural functions, emerging as a sacred site of ritual activity, meditation, and community-based ceremonies that reinforce cultural memory.

3. Visibility & Safety

Both sites were associated with fear, discomfort, and insecurity. Walking Path, Katubedda had apparent associations with poor light, excessive overgrowth, and inherently insecure. Thun Bodhiya was empty, dark at night, and socially disconnected and didn't provide people with the opportunity to gather, making it problematic for people to want to visit. Walking Path, Katubedda has now been enhanced for comfort with seating, shaded areas, improved lighting, paths, and perceived openness/insecurity features. Thun Bodhiya now gets used for rituals, and gatherings that promote a sense of safety and comfort, thereby establishing a social dimension. So, regeneration replaced feelings of fear and neglect with comfort, safety, and belonging, increasing public trust in the spaces.

4. Identity & Spatial Character

Katubedda Walking Path was spatially fragmented and undefined, with no distinctive design or landmarks. It lacked orientation elements and symbolic structures, leaving it as a neglected corridor rather than a meaningful public space. Thun Bodhiya was Functioned as an unstructured vacant land near the water body with three large boo trees. Its spatial character was weak, with no design interventions or symbolic spatial markers to create attachment. After the regeneration Katubedda Walking Path's spatial layout now emphasizes continuity and visual coherence, creating a recognizable space corridor for movement. Pathways, lighting, and edges provide clarity and orientation, reinforcing its identity as a shared recreational space. Now Thun Bodhiya has introduced the shrine structures, and gathering spaces reshaped its spatial character into a symbolic and spiritual landscape. The spatial arrangement now communicates cultural meaning and strengthens its identity as a spiritual landmark. Regeneration changed spatial character for both sites from dark and neglected spaces to legible, symbolic, and identity-filled landscapes

4.3. PHOTOGRAPHIC ANALYSIS

In this study, photographic analysis aims to record and understand today versions of the regenerated case study site. The photographs allow for critical observation and analysis of the current characteristics, features, and patterns of use created through regeneration. By integrating photographic evidence with the key parameters set out in the study as accessibility and connectivity; safety and comfort; functional diversity; identity and symbolic value; and community involvement, the analysis aims to show how the landscapes have been transformed into valued civic spaces for the community.

Photograph	Description
	<ul style="list-style-type: none"> • Parking arrangements provide visitors with easy access to arrive by vehicles, which makes the site more inclusive to individuals from outside of the immediate area. • The organized parking development and related infrastructures (pathways, signage, lighting) represents a shift in land use / abandonment to intended use. • When parking is provided, it can lead to increased use of the community site, and greater participation in the community simply because people are more at ease about coming and going to the site. • The improvement of infrastructure adds spatial clarity and organization - leading to a more inviting, usable space.
	<ul style="list-style-type: none"> • Physical investment in infrastructure demonstrates the long-term sustainability and value placed on the site by authorities and the community. • Infrastructure improvements bring spatial clarity and order, creating a more welcoming and usable environment. • Surrounding road and other infrastructure development occurs to high functionality.
	<ul style="list-style-type: none"> • The intention of creating spaces such as Bodhiya, seating areas, shrines, and shaded places is to promote rituals, worship, and meditation. • The following elements promote the utilization of the site for a range of uses; pathways, benches, lighting, and landscaping allow for walking, jogging, cycling, and relaxation.
	<ul style="list-style-type: none"> • Functions are fully changed from abandonment period into spiritual and recreational functions in regenerated period in case studies. • Worshipping, relaxing, jogging, gathering activities can be seen in case studies.

5. Findings and Discussion

The findings of this study reveal how the regeneration of abandoned landscapes adjacent to water bodies can significantly transform their spatial and social roles within semi-urban communities. Both case studies as Thun Bodhiya in Panadura and the Katubedda Walking Path in Moratuwa, illustrate distinct but complementary impacts of regeneration, shaped by community needs, cultural values, and environmental conditions. At Thun Bodhiya, regeneration has been mostly spiritual and cultural in scope. A place which was once abandoned with negative associations, and the presence of memories of degeneration and neglect, those in the community have now re-imagined the site as a sacred landmark. This 'spiritual infrastructure' as the Bodhiya, shrines, and shaded seating, has not only permitted religious practices, meditation, and cultural ceremonies but also signifies an example of regeneration, where previously abandoned places can become relevant

once more by reinstating cultural heritage and collective memory, and strengthening emotional and symbolic ties to the community. The Katubedda Walking Path, on the other hand, illustrates how regeneration can change the recreational and social functions of a previously neglected and polluted canal edge into a safe and inclusive public space that can cater to an active lifestyle, including walking, jogging, and cycling, and everyday leisure activities in the presence of infrastructure, including seating. Where the previously neglected canal edge became 'buried', it has regained status as a node of social interaction, providing chances for gatherings and informal meetings, as well as family, probably leisure and playful activities. This is reflective of how regeneration can be used to intervene and improve health and well-being at the community and individual level, social connectedness, ability to raise social capital, and addressing urban environmental issues, such as pollution and flooding.

The regeneration of both sites was strongly shaped by their proximity to water bodies and their socio-spatial context. Thus, proximity to water and latent cultural meaning were critical spatial factors in Thun Bodhiya while accessibility, urban density and state initiative were defining factors in Katubedda. Across both sites, several common findings emerge:

1. Enhanced accessibility and connectivity
2. Improved safety and comfort
3. Functional diversity
4. Reinforced identity and symbolism
5. Community engagement
6. Revitalization of temporal uses

The findings indicate that the regeneration of abandoned landscapes adjacent to water bodies is strongly affected by spatial context (location, cultural significance, accessibility) and is realized through changes in planning, land use, and functions. While the Thun Bodhiya provides an example of a community-led, culturally rooted regeneration, the Katubedda Walking Path reflects a state-led, infrastructure-based regeneration. In both cases, the processes are about creating space of social significance, safety, and continuity. This demonstrates that spatial regeneration can restore a lost identity to place and reintegrate forgotten landscapes into everyday urban life.

6. Conclusion

This research was explored in the spatial impacts of regenerating abandoned landscapes adjacent to water; two case studies were selected to explore this question as Thun Bodhiya, Panadura and Katubedda Walking Path, Moratuwa. It was found that regeneration is more than an act based on physical transformation of place, it is reconfiguration of the spatial character of place, re-establishing functions, and re-strengthening community relations to place. Regeneration of space at Thun Bodhiya was community driven based on spiritual practices, changing an abandoned and neglected place into a sacred cultural space. Respecting spatial parameters of the existing landscape the focus of spatial design pioneered access circulation, shaded areas, and locations for the act of worship placing spiritual emphasis on reinforcing symbolic identity and cultural continuity. Katubedda Walking Path clearly demonstrates a state driven initiative, as an ignored and abandoned space, once heavily polluted and which functioned as an informal pit stop for wrong uses, was transformed into a recreational zone on the abandoned area. Whilst regeneration of the space potentially creates improved accessibility, connectivity, and multiple uses (walking, cycling, informal social gatherings) it showcases how design practice can restore significantly degraded environments in urban centres for community benefit.

In short, the research concludes that spatial regeneration of abandoned places enhances accessibility, safety, usability, identities and engagements of abandoned spaces. Abandoned sites can be made useful, relevant and meaningful again. Ultimately, this research has shown that there are different paths to regeneration, whether community or state driven there are equal consequences for spatial design if it acknowledges and respects its local context, cultural values and ecological settings.

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